

**METHOD FOR SCREENING AND PRODUCING COMPOUND LIBRARIES**

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**ABSTRACT OF THE INVENTION**

A secondary compound library produced by a method of screening a compound library or portion thereof by absorption is provided. The method includes a step (i) that screens a primary compound library or portion thereof having a plurality of test samples containing isolated compounds or isolated mixtures of compounds per test sample by generating an *in vivo* absorption profile for each of the test samples from initial dose data and from *in vitro* bioavailability data comprising permeability and solubility data for each of the test samples, wherein the absorption profile includes at least one of rate of absorption, extent of absorption, and concentration of a test sample. Step (ii) produces a secondary compound library that includes at least one compound from the primary compound library having a desired absorption profile.

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